

Tropical Marine Fishes from Pensacola, Florida

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A NUMBER of reports have been published on the presence of marine tropical shorefish in the northeastern Gulf of Mexico (Caldwell and Briggs, 1957; Briggs, 1958; Caldwell, 1959; Caldwell, 1963). Concentrations of this fauna are found in the Panama City and Destin areas.

Although previously unrecorded, a similar summer tropical fish fauna exists near Pensacola, Florida. Caldwell (1959) noted the uncertain extent of the tropical shorefish west of Destin and cited the Pensacola area as having unpublished and unconfirmed reports of marine tropical fishes. The authors, plus numerous local skin divers and aquarium enthusiasts, have been aware of the presence of tropical fishes at Pensacola for a number of years.

Occurrence of tropical fishes along the northeastern Gulf can be attributed to annual recruitment of young fish stages hatched in more southern waters and transported northward by summer surface currents reported to exist in the Gulf of Mexico (Caldwell, 1959). Leipper (1954) illustrates a branch of the Gulf Stream that flows northward from the Caribbean and divides the north central Gulf coast into westerly and easterly sections; the latter current influences the Pensacola, Destin, and Panama City regions.

Suitable bottom habitats and regular recruitment of individuals brought in by currents are the two major factors influencing distribution of the tropical fauna, both fishes and invertebrates, in the Gulf of Mexico (Caldwell, 1963).

In Pensacola rock and steel jetties and local wrecks provide suitable bottom habitats for the young migrants. Most of the fishes listed below were collected from the sunken battleship *USS Massachusetts*, the "Coast Guard Wreck", the steel jetty at Fort McRee, and nearby rock piles.

The *USS Massachusetts* was intentionally sunk off Pensacola Bay in August, 1921. It is located 2.5 miles south of the mouth of the bay in approximately thirty feet of water.

The "Coast Guard Wreck", so named because of its proximity to the U. S. Coast Guard Station on Santa Rosa Island, consists of ballast rock and few timbers remaining of the Norwegian ship

Katherine which sank during a severe storm on August 7, 1894. The wreck is located in the Gulf approximately two hundred yards off shore in fifteen feet of water.

The Fort McRee steel jetty is a steel-rock structure constructed by the U.S. Army Corps of Engineers (date unknown) on the west side of the entrance to Pensacola Bay.

Unless otherwise stated, all the Pensacola specimens were collected by SCUBA divers using leaded nets, plastic bags, spear guns and "slurp guns".

The specimens recorded in this paper were deposited in the Pensacola Junior College Marine Collection (PJCMC-no catalog numbers) with the exception of the spotfin hogfish which was deposited in the fish collections of the U. S. National Museum (USNM-uncat.).

All measurements refer to standard length in millimeters.

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FAMILY SCIAENIDAE. DRUMS

Equetus acuminatus (Bloch and Schneider). Cubbyu

1, 48.3 mm (PJCMC), *Massachusetts* wreck, 3 July 1965, coll. Gene Bond. Schools of from 6 to 20 individuals about 15 mm long were frequently seen at all collecting stations in May.

Yerger (1961) recorded two specimens from Whistle "26" Buoy, 10 miles south of Alligator Harbor, Florida. Allison (1959, unpubl. MS) collected this species at the jetties at Panama City, Florida. Briggs (1958) reported the distribution of this drum as occurring from Bermuda and North Carolina to Rio de Janeiro and throughout the Gulf of Mexico. The Pensacola specimen represents a new locality record for the northeastern Gulf of Mexico.

FAMILY CHAETODONIDAE. BUTTERFLYFISHES

Chaetodon capistratus Linnaeus. Foureye butterflyfish

1, 46.8 mm (PJCMC) rock pile one quarter mile south of Ft. McRee steel jetty, 29 October 1966, coll. C. F. Crooke.

2, 25 and 27.3 mm (PJCMC), middle of Ft. McRee steel jetty (northside), 26 August 1967, coll. C. F. Crooke.

Briggs (1958) reported the range of this butterflyfish as Massachusetts to the Lesser Antilles and Panama. Allison (1959, unpubl. MS) observed many small specimens at the east jetty at Panama City, Florida. The most northern published report of this species in the Gulf of Mexico is from Monroe County, Florida (Moe, Heemstra, Tyler and Wahlquist, 1966). The present records extend the range of this species from the Florida Keys into the northeastern Gulf of Mexico.

Chaetodon ocellatus Bloch. Spotfin butterflyfish

1, 42.1 mm (PJCMC), "Coast Guard Wreck", 28 August 1965, coll. Gene Bond.

3, 54.4 to 74.3 mm (PJCMC), Ft. McRee steel jetty, 29 October 1966, coll. C. F. Crooke. Crooke reported schools of from 6 to 8 individuals about 15 mm long at the Ft. McRee jetty and the *Massachusetts* wreck in May.

Briggs (1958) reported the range of this butterflyfish as Massachusetts to Brazil and widespread in the Gulf of Mexico. This species has previously been reported from Destin, Florida (Caldwell and Briggs, 1957) and from the jetties at Panama City, Florida (Caldwell, 1959). Caldwell and Briggs (1957) also noted that this species had been seen by reliable observers in the Pensacola area.

Chaetodon striatus Linnaeus. Banded butterflyfish

1, 28 mm juvenile (PJCMC), "Coast Guard Wreck", 17 May 1967, coll. Keitz Haburay. Identification of this fish was confirmed by Victor G. Springer.

1, 69.3 mm (PJCMC), rock pile one quarter mile south of Ft. McRee steel jetty, 26 August 1967, coll. C. F. Crooke.

The banded butterflyfish is the least common of the three species of butterflyfishes collected in the Pensacola area. Briggs (1958) recorded the range of this species as both sides of the Atlantic, in the western Atlantic from New Jersey to Rio de Janeiro and the northeastern Gulf of Mexico. Caldwell (1959) recorded it from Destin, Florida, and Caldwell and Briggs (1959) observed

two juvenile specimens in water less than three feet deep at the jetties at Panama City, Florida.

Holocanthus isabelita Jordan and Rutter. Blue angelfish

1, 215 mm (PJCMC), *Massachusetts* wreck, 11 November 1965, coll. C. F. Crooke. Crooke sighted adult individuals during January and February in the Ship Channel of Pensacola Bay.

1, 43.9 mm juvenile (PJCMC), steel caissons quarter mile west of Ft. McRee steel jetty, 15 October 1966, coll. C. F. Crooke. Identification of both specimens was verified by Victor Springer.

Briggs (1958) listed the range of this angelfish as occurring from Bermuda and the Florida Keys to the West Indies, and in the eastern and northeastern Gulf of Mexico. *H. isabelita* has been reported in the northwestern Gulf of Mexico from Port Aransas, Texas (Springer and Hoese, 1958), but the northernmost report of this species in the northeastern half of the Gulf of Mexico is from off Tampa Bay, Florida (Moe, et al., 1966).

According to Feddern (1968), *H. isabelita* replaces *H. bermudensis* Goode as the valid name for this species.

FAMILY POMACENTRIDAE. DAMSELFISHES

Abudefduf saxatilis (Linnaeus). Sergeant major

3, 31.3 to 37.6 mm (PJCMC), "Coast Guard Wreck", July 1965, coll. Keitz Haburay.

Briggs (1958) listed this species as occurring on both sides of the Atlantic and Pacific, in the western Atlantic from Bermuda and Rhode Island to Uruguay and throughout the Gulf of Mexico. Caldwell and Briggs (1957) and Caldwell (1959) collected this species at the Panama City jetties. *Abudefduf saxatilis* has also been reported from the northwestern Gulf of Mexico, and Dawson (1962) collected a single specimen from floating Sargassum in the north-central area of the Gulf.

Eupomacentrus variabilis (Castelnau). Cocoa damselfish

1, 52.1 mm (PJCMC), "Coast Guard Wreck", 11 November 1965, coll. Keitz Haburay. This is one of the most common tropical fish collected in the Pensacola area and we have collected it

at all stations. Young individuals appear in May, measure about one-fourth inch long, and by September are nearly 50 mm long.

This species has previously been reported from the jetties at Panama City (Caldwell, 1959) and also from the Fort Walton Beach area (Caldwell, 1963).

FAMILY LABRIDAE. WRASSES

Bodianus pulchellus (Poey). Spotfin hogfish

1, 187 mm (USNM), Gulf of Mexico, fall 1965, coll. H. Banfell and J. Stringfellow. The fish was hooked approximately 40 miles southeast of Pensacola Bay in 40 fathoms. The identification was confirmed by Victor Springer.

Numerous specimens of this species have been collected in the Florida Keys. Feddern (1963) reported the range as occurring from southeastern Florida and the Bahamas to northern South America. Anderson and Gutherz (1964) collected five specimen off Cape Romain, South Carolina, and reported a range extension of about 450 nautical miles northward along the Atlantic coast of the United States. We found no reference to its occurrence in the northern Gulf. The Pensacola specimen apparently constitutes the first record of this species in the Gulf of Mexico, north from the Florida Keys.

Bodianus rufus (Linnaeus). Spanish hogfish

1, 79 mm (PJCMC), steel caissons located a quarter mile west of Ft. McRee steel jetty, 11 November 1966, coll. C. F. Crooke. Identification verified by Victor Springer.

The range of this species is Bermuda and Florida to Rio de Janeiro and the northeastern and southwestern Gulf of Mexico; also to St. Helena and the Ascension Islands (Briggs, 1958). Feddern (1963) reported this species inhabits both inshore and offshore coral-rock areas along the Florida Keys. We found few references to its occurrence in the northern Gulf, and the Pensacola specimen apparently represents the first published record of this species from the inshore waters of the Florida Panhandle.

FAMILY ACANTHURIDAE. SURGEON FISHES

Acanthurus chirurgus (Bloch). Doctor fish.

2, 46.7 to 48.7 mm (PJCMC), "Coast Guard Wreck", August

1965, coll. Gene Bond. We have noticed this species at all collecting stations. Crooke has also collected specimens from a brick pile one-half mile south of the Pensacola Harbor Light House.

Briggs (1958) reported the range of this species as both sides of the Atlantic; in the western Atlantic from Bermuda and Massachusetts to Rio de Janeiro and the northeastern and southwestern Gulf of Mexico. Caldwell, and Briggs (1957) collected this fish at the Panama City jetties.

LITERATURE CITED

- ALLISON, DONALD T. 1959. Tropical fishes of Panama City, Florida. Unpublished student paper in Biological Science, F.S.U.
- ANDERSON, WILLIAM D., AND ELMER J. GUTHREZ. 1964. New Atlantic coast ranges for fishes. *Quart. Jour. Florida Acad. Sci.*, vol. 27, no. 4, pp. 299-306.
- CALDWELL, DAVID K. 1959. Observations on tropical marine fishes from the northeastern Gulf of Mexico. *Quart. Jour. Florida Acad. Sci.*, vol. 22, pp. 69-74.
- CALDWELL, DAVID K., AND JOHN C. BRIGGS. 1957. Range extensions of western North Atlantic fishes with notes on some soles of the genus *Gymnachirus*. *Bull. Florida State Mus., Biol. Sci.*, vol. 2, no. 1, pp. 1-11.
- DAWSON, C. E. 1962. New records and notes on fishes from the north-central Gulf of Mexico. *Copeia*, 1962, no. 2, pp. 442-444.
- FEDDERN, HENRY A. 1963. Color pattern changes during growth of *Bodianus pulchellus* and *B. rufus*. *Bull. Mar. Sci.*, vol. 13, no. 2, pp. 222-241.
- . 1968. Hybridization between the western Atlantic angelfishes, *Holocanthus isabelita* and *H. ciliaris*. *Bull. Mar. Sci.*, vol. 18, no. 2, pp. 351-382.
- LEIPPER, DALE F. 1954. Physical oceanography of the Gulf of Mexico. In Galtsoff, Paul S., *Gulf of Mexico. Its origin, waters, and marine life.* U. S. Fish and Wildlife Serv., Fish. Bull., vol. 55, no. 89, pp. 119-137.
- MOE, MARTIN A., PHILLIP C. HEEMSTRA, JAMES E. TYLER, AND HAROLD WAHLQUIST. 1966. An annotated listing of the fish reference collection at the Florida Board of Conservation Marine Laboratory. Florida State Board Conserv., Mar. lab. Special Sci. Report No. 10, pp. 1-121.

SPRINGER, VICTOR G., AND HINTON D. HOESE. 1958. Notes and records of marine fishes from the Texas coast. *Texas Jour. Sci.*, vol. 10, pp. 343-348.

YERGER, RALPH W. 1961. Additional records of marine fishes from Alligator Harbor, Florida, and Vicinity. *Quart. Jour. Florida Acad. Sci.*, vol. 24, no. 2, pp. 111-116.

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